

CLAIMS

1. A structured material composed by including a noble metal, comprising an oriented layer formed on a layer containing a Group 4A metal.

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2. The structured material according to claim 1, wherein said layer containing the Group 4A metal is provided on a MgO (001) layer.

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3. The structured material according to claim 1, wherein said layer containing the Group 4A metal has a thickness within a range of from 0.1 to 3.0 nm.

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4. The structured material according to claim 1, wherein said noble metal is Pt, Pd, Ir, Rh, Ag or a combination thereof.

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5. The structured material according to claim 1, wherein said layer containing the Group 4A metal is a Ti layer, a Zr layer, a Hf layer or a layer constituted of a combination of these metals.

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6. The structured material according to claim 2, wherein said layer containing the Group 4A metal is dispersed in the shape of islands on said MgO (001) layer.

7. A magnetic recording medium characterized in including, on a substrate and in order from the substrate side, a MgO (001) layer, a layer containing a Group4A metal, an oriented layer, and a recording
5 layer.

8. A magnetic recording/reproducing apparatus comprising:

a magnetic head capable of a conducting
10 magnetic recording on a magnetic recording medium comprising, on a substrate and in order from the substrate side, a MgO (001) layer, a layer containing a Group 4A metal, an oriented layer, and a recording layer; and

15 a magnetic head driving section for driving said magnetic head.

9. A method for producing a structured material comprising:

20 a first step of preparing a member having a MgO (001) layer;

a second step of forming a layer containing a Group 4A metal on said MgO (001) layer; and

a third step of forming an oriented layer
25 composed by containing a noble metal on said layer containing the Group 4A metal.

10. The method for producing a structured material according to claim 9, wherein said third step is executed with the temperature of said layer containing the Group 4A metal being equal to or
5 higher than 250°C but lower than 600°C.